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EXAMINER

EWART, JAMES D

ART UNIT PAPER NUMBER

2617

DATE MAILED: 03/27/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/591,015

Applicant(s)

SEBASTIAN ET AL.

Examiner

James D. Ewart

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 January 2002.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Response to Arguments

1. Applicant's arguments filed January 04, 2002, have been fully considered by Examiner, but they are not deemed persuasive. Applicant teaches a cellular wireless communication system that can provide enhanced information transmission capacity, minimize the effects of fading, and allows for re-use of information carrying signals having common transmission characteristics. Applicant provides an example in figure 3a of the specification in which the hexagonal area is a common channel area and each of the surrounding base stations 305, 310, 315, 320, 325 and 330 use the same frequencies, f1 – f10 for instance, inside of the common channel area. The mobile device in the center of the hexagon is in communication with each of the base stations via the same carrier frequency such as f1. As claimed, the independent claims only indicate a common channel area which could be interpreted as the overlap coverage area between base stations and it is well known in the art to have multiple base stations communicating with a mobile station in this area during a soft handoff. However, the claim doesn't even claim this since the claim does not indicate simultaneously communicating with more than one base stations. The independent claims only teach a first base station with a plurality of transceivers and a subscriber unit that receives and recovers information from a second base station in a common channel area. The Examiner can broadly interpret this with the Hudson reference which has a first base station i.e. BS1 that has multiple transceivers and the common channel area are the sectors with the same frequency reuse and a second base station BS2 in communication with a subscriber device. Although claim 15 states transmitting multiple information signals to at least one subscriber unit, it is not descriptive of Applicant's invention and can be interpreted as a single base station sending multiple information signals to a

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subscriber unit which is a limitation of most cellular communication systems. In addition, claims 3, 8, 9, 10, 11 and 16 are unclear because they state "common assigned channel", but there is no reference to each base station being assigned the same channels as every other base station in the common channel area or that the subscriber unit is assigned two common channels, thus leaving a very broad interpretation available for these claims and for the claims depending on claims 3 and 16. Claims 8 and 9 also indicate "corresponding to the common channel area" which is unclear. Claims 12-13 are also unclear because they states "communication diversity", but there is no reference to communication diversity in claim 1.

2. Regarding the informality objection to the drawings, Applicant's amendment has overcome the objection and the Examiner withdraws the objection.

3. Regarding the 35 USC § 112 rejection of claims 4-7, Applicant's amendment has overcome the rejection and the Examiner withdraws the objection.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 12-13 recite the limitation "communication diversity". There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 1-9 and 14-20 are rejected under 35 U.S.C. 102(3) as being anticipated by Hudson (U.S. Patent No. 5,901,356).

Regarding claim 1, Hudson teaches a cellular wireless channel re-use system comprising a base transceiver station cluster (Figure 1), the base transceiver station cluster comprising: a first plurality of transceivers (Figure 1), and a plurality of common channel areas (Figure 1, sectors labeled 1,2,...6) each common channel area having a unique set of common channels assigned (Column 2, Lines 36-44), each common channel area comprises at least one mobile unit, each subscriber unit receiving and recovering information signals from a second plurality of base station transceivers through one of the set of common assigned channels that correspond to the common channel area (Column 2, Lines 57-59).

Regarding claims 2, 14 and 15, Hudson further discloses that said cluster is one of a plurality (Figure 1, Column 3, Lines 7-10). Regarding claim 15, transmitting multiple information signals to at least one subscriber unit, it is not descriptive of Applicant's invention

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and can be interpreted as a single base station sending multiple information signals to a subscriber unit which is a limitation of most cellular communication systems.

Regarding claims 3 and 16, Since the system of Hudson may be for use in a single-characteristic system (Column 2, Lines 51-55), each commonly assigned channel would inherently comprise a common transmission characteristic.

Regarding claims 4-7 and 17, Hudson states that the characteristic may be time (TDMA), frequency (FDMA), or code (CDMA) (Column 2, Lines 52-56).

Regarding claims 8 and 18, Hudson discloses wherein the second plurality of base station transceivers generating signals within the common assigned channel corresponding to the common channel area of the corresponding subscriber unit, are located with the common channel area (Figure 1). The base station generates signals in its sectors which are common channel areas.

Regarding claims 9 and 19, Hudson discloses wherein at least one of the second plurality of base station transceivers generating signals within the common assigned channel characteristic corresponding to the common channel area of a corresponding subscriber unit, are located outside of the common channel area (Figure 1 e.g. BS12, sector 5 and Column 1, Lines 31-37). The subscriber unit would recover information from same channel in the adjacent sector 5.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hudson in view of Roy, III et al. (U.S. Patent No. 5,642,353).

While disclosing applicants invention of claim 1 as set forth above, Hudson does not state that the mobile unit employs spatial multiplexing. Roy states that spatial multiplexing offers improved transmission quality over a conventional sectored system (Column 18, Lines 34-47). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to add such a feature to Hudson as it would improve transmission and reception quality.

7. Claims 11-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hudson in view of Schmidt et al. (U.S. Patent No. 6,085,092).

While disclosing applicants invention of claim 1 above, Hudson does not disclose that the mobile station allows for diversity. Schmidt discloses that it is useful in a sectored system (FIG 3) for the base station and mobile station to allow transmitter and receiver diversity (Column 3,

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Lines 12-29, Column 7, Lines 28-36). Therefore, it would have been obvious to one of ordinary skill in the art to add such a feature to Hudson as it would reduce power use.

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Blakeney et al. U.S. Patent No. 5,267,261 discloses mobile station assisted soft handoff in a CDMA cellular communication system.

Chheda et al. U.S. Patent No. 5,946,621 discloses method of optimizing neighbor set during soft handoff of a mobile unit in a CDMA cellular environment.

Gilhousen et al. U.S. Patent No. 5,109,390 discloses diversity receiver in a CDMA cellular telephone system.

Gilhousen et al. U.S. Patent No. 5,625,876 discloses method and apparatus for performing handoff between sectors of a common base station.

Hartikainen et al. U.S. Patent No. 6,757,524 discloses diversity reception in a mobile communication system.

Legg et al. U.S. Patent No. 6,414,947 discloses communication network and method of allocating resource therefor.

Muszynski U.S. Patent No. 6,009,328 discloses inter-exchange soft handoff in a cellular telecommunications system.

Ohtani et al. U.S. Patent No. 6,807,420 discloses mobile communication system, mobile station and diversity handover branch control method.

Patel U.S. Patent No. 6,907,243 discloses method and system for dynamic soft handoff resource allocation in a wireless network.

Tiedmann, Jr. et al. U.S. Patent No. 6,216,004 discloses cellular communication system with common channel soft handoff and associated method.

9. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

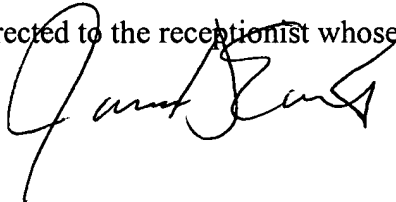
A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to James D. Ewart whose telephone number is (571) 272-7864. The examiner can normally be reached on M-F 7am - 4pm. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William Trost can be reached on (571)272-7872. The fax phone numbers for the organization where this application or

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proceeding is assigned are (571) 273-8300 for regular communications and (571) 273-8300 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (571)272-2600.



James Ewart
March 17, 2006



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